Remarks/Arguments

Reconsideration of this application, as amended, is respectfully requested.

FIGS. 2 and 3 of the drawings have been amended to add lines left off the right-hand arm 34 of FIG. 2 and the arm 34 of FIG. 2. Also, in both FIGS. 2 and 3, the shape of the receptacle for the axle 28 has been changed to fit the profile of the axle 28.

FIG. 3 of the drawings has additionally been amended by breaking away and sectionalizing a portion so as to show the ball chamber described in paragraph **[0020]** of the specification, this paragraph being amended to reflect the change made to FIG. 3.

FIG. 4 of the drawings has been amended to add reference numeral 44 which indicates the console mentioned in paragraph **[0025]** and to add the bracket 71 that is engaged with the pins 70 and 70', described in paragraph **[0025]**.

Paragraphs **[0005]** and **[0006]** have been amended to correct an error in description which indicated that self-aligning bearings were used to mount the wheels to the wheel axis, which is not the case.

A new paragraph was added after paragraph **[0011]** to describe FIG. 4, such paragraph being erroneously omitted from the application as originally filed.

The claims remaining in this application are 1 and 3-8.

Claim 3 is under an objection because as originally presented "first", in line 3, was not correctly spelled. This error has been corrected.

Claims 1-8 are under a rejection based on 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement for the reason that the specification does not clearly describe how the suspension does not introduce bending loads into the bearing elements when the bearing elements move into positions for establishing a pivot axis that is not parallel to the horizontal pivot axis defined by the axle 28. It is respectfully submitted that this rejection is in error.

Specifically, with reference to paragraphs **[0020]** and **[0029]** it can be seen that the ball segments 50 of spherical bearings 36 at the opposite sides of the baler rotate in the ball chambers 53 in response to the axle 28 moving so as to no longer be parallel with the axis defined by the fixed axle 38. Because of the ball segments 50 having the ability to rotate with three degrees of freedom, no bending loads, due

to the unequal vertical movement of the opposite ends of the axle 28, are imposed on the ball segments 50 or the ball chambers 53. For this reason, it is submitted that the claimed invention is clearly enabled by the disclosure and that one skilled in the art would readily recognize this.

Claims 1 and 4 are under a rejection based on 35 U.S.C. 102(e) as being anticipated by Ham, Jr. et al. (6,354,614). It is respectfully submitted that, as now presented, claim 1 defines over Ham, Jr. et al. Specifically, among other structure, claim 1 requires that the mounting arms be rigidly fixed to the wheel axle to be respectively mounted to the opposite sides of the vehicle frame by a spherical bearing.

Ham, Jr. et al. discloses an axle mounting structure including a plurality of arms 10. Opposite ends of each of the arms 10 are each defined by a cylindrical body 20 that receives an **elastomeric bushing 22 in which a metal sleeve 40** is received. One end of each arm 10 is pivotally mounted to the vehicle frame member 12 by a bolt that passes through the sleeve 40, and the other end of each arm 10 is **pivotally** mounted to the axle by a bolt that passes through the sleeve 40.

Thus, it is clear that Ham, Jr. et al. do not disclose the required spherical bearing, and the axle support arms are not rigidly connected to the axle as claimed. Accordingly, claim 1 is thought allowable over Ham, Jr. et al.

Claim 4 depends from claim 1 and is likewise thought allowable.

Claims 1 and 4 are also rejected under 35 U.S.C. 102(b) as being anticipated by Santo et al. As now presented, claim 1 is thought to define patentably over Santo.

Referring now to FIG. 2, there is shown a representative embodiment of the Santo et al. disclosure wherein a suspension including a pair of arms 12,14 respectively having first ends fixed to spindles 18 and 20, is shown. The arms 12, 14 have second ends containing resilient mounts 26 and 28 located between, and secured to, respective pairs of frame flanges 38 and 40 by pins 40. A twist beam 10 extends between, and is fixed to the arms 14 and 16 at respective locations adjacent the second ends.

Thus, it is clear that Santo et al. do not disclose the spherical bearing for mounting each arm to the frame, as required by claim 1. Further, there is no axle and the arms are not releasably fixed to an axle, as claimed.

Claim 4 depend from claim 1 and is likewise thought allowable.

Claims 1, 2 and 4-7 are under a rejection based on 35 U.S.C. 103(a) as being unpatentable over Pierce et al. in view of Mauck, with the Examiner stating that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pierce et al. with the teaching of Mauck in order to allow increased flexibility in the suspension in order to provide a smoother ride and prevent damage to the suspension. This rejection is thought overcome by the amendment to claim 1.

Specifically, Pierce et al. disclose (see embodiment of FIGS. 15 and 17) an axle suspension including a pair a arms 24" releasably secured to an axle 28" at a location approximately midway between opposite ends of the arms 24". One end of the arms 24" is provided with a bushing assembly 23" which includes a cylindrical receptacle 32" in which an elastomeric member 34" is received along with a central sleeve 38". The rear of each arm 24" defines a flat bearing plate 50" supporting one end of an air bag 25" having its other end in engagement with the frame 31".

Mauck discloses a suspension for sets of tandem wheels 6 including an axle 18 extending through and fixed to an arm 19 at a central location between opposite ends of the arm 19. One end of the arm 19 is fixed to a bracket 28 carrying a pin 22 received for moving vertically within a vertical slot 16 provided in a bracket 15 fixed to the vehicle frame 2. The opposite end of the arm 19 defines a shell 49 encompassing an ellipsoid neoprene block 47 that is bonded to a sleeve 40. Located in opposite ends of the sleeve 40 are nuts 41 and bolts 27 passing through mounting plates at the opposite ends of the sleeve 40 and are screwed into the nuts 41 so as to provide support for the arm 19. The sleeve 40 is prevented from rotating about the nuts 41 by keys 43 welded onto the plates 8 and projecting into slots 42 provided in opposite ends of the sleeve 40. Due to the clamping action of the shell halves 52 and 53 on the neoprene block 47, vertical movement of the arm 19 causes flexure or twisting within the block 47.

Clearly neither Pierce et al. nor Mauck disclose the required spherical bearing. The Examiner has erroneously considered the neoprene block 47 to be a teaching for the claimed "spherical bearing", but this term is a well understood term of art directed to structures where one spherical, or part spherical surface of one bearing component engages and moves relative to a complementary shaped spherical surfaces of a second bearing component, and certainly does not include the flexible coupling of Mauck. Therefore, claim 1 is thought to be patentable over

these references. Furthermore, none of the references of record disclose axle supporting arms employing spherical bearings so as to eliminate bending loads when the wheel axle moves to dispositions causing one arm to pivot vertically relative to the other arm.

Claim 2 has been cancelled.

Claim 4 depends from claim 1 and is likewise thought allowable. Claim 4 is thought allowable for the additional reason that it requires the suspension arms to each be symmetrical about a plane passing along a longitudinal axis of the arm so that the arms may be exchanged from one side to the other during assembly of the arms to the axle, and neither Pierce et al. nor Mauck teach such a pair of exchangeable arms.

Claim 5 depends from claim 1 and is likewise thought allowable.

Claim 6 depends from claim 1 and is likewise thought allowable. Claim 6 is thought allowable for the additional reason that it requires the frame and the suspended axle assembly to include respective elements that may be connected together to substantially prevent downward movement of the axle relative to the frame, and no such structure is present in either of Pierce et al. or Mauck. While Mauck does disclose a shock absorber coupled between the frame and the suspended axle, it does not operate to **substantially prevent** movement of the axle relative to the frame, since shock absorbers merely slow the movement but do not substantially prevent movement.

Claim 7 depends from claim 6 and is likewise thought allowable. Claim 7 is thought allowable for the additional reason that it further requires the respective elements of claim 6 to be pins and for the interconnecting structure to be brackets received over the pins, and no such structure is present in the prior art.

Claim 8 is under a rejection based on 35 U.S.C. 103(a) as being unpatentable over Pierce et al. in view of Mauck, as applied to claim 1, and further in view of Matthias et al. Claim 8 depends from claim 1 and is thought allowable for the reasons stated above since Matthias et al., like Pierce et al. and Mauck, does not teach using a spherical bearing to couple the arms to the opposite ends of the second axle, as required by claim 1.

In conclusion, it is believed that this application is in condition for allowance, and such allowance is respectfully requested.

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Respectfully,

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Enclosure: Substitute Drawing FIGS. 2-4

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